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Applicants : Kenneth (NMI) Schofield, Mark L. Larson and Keith J. Vadas
For : REARVIEW VISION SYSTEM FOR VEHICLE INCLUDING
PANORAMIC VIEW
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The listing of the claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Please cancel claims 1-49.

Please add new claims 50-91 as follows:

1. – 49. (cancelled)

50. (New) A vision system for a vehicle, comprising:

a vehicle equipped with at least two image capture devices, said at least two image capture devices capturing an image external of the vehicle, said at least two image capture devices having overlapping fields of view;

an image processor, outputs of said at least two image capture devices processed by said image processor, said image processor producing a synthesized image from said outputs of said at least two image capture devices; and

said image processor processing said outputs by at least one technique chosen from luminant blending, chrominant blending, dynamic range extending, pixel group compensation, anti-blooming, multiple exposure, image morphing compensation or image warping compensation.

51. (New) The vision system for a vehicle of claim 50 including a display screen viewable by an occupant of the vehicle, said display screen displaying said synthesized image.

52. (New) The vision system for a vehicle of claim 50 wherein said at least two image capture devices have their fields of view in a direction generally rearward with respect to the vehicle.

53. (New) The vision system for a vehicle of claim 50 wherein said at least two image capture devices have their fields of view in a direction generally forward with respect to the vehicle.

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54. (New) The vision system for a vehicle of claim 53 wherein said vision system comprises a night-vision system.

55. (New) The vision system for a vehicle of claim 50 wherein said at least two image capture devices have their fields of view generally symmetrical about the longitudinal axis of the vehicle.

56. (New) The vision system for a vehicle of claim 50 wherein said at least two image capture devices comprise multi-pixel imaging arrays.

57. (New) The vision system for a vehicle of claim 56 wherein said multi-pixel imaging arrays comprise CMOS imaging arrays.

58. (New) The vision system for a vehicle of claim 51 wherein said screen comprises one of a flat panel display and a cathode ray tube.

59. (New) The vision system for a vehicle of claim 51 wherein said screen comprises a flat panel display.

60. (New) The vision system for a vehicle of claim 59 wherein said flat panel display comprises one of a liquid crystal display, a plasma display and a field emission display.

61. (New) The vision system for a vehicle of claim 59 wherein said flat panel display comprises a liquid crystal display.

62. (New) The vision system for a vehicle of claim 51 wherein said screen is positioned within the field of view of the driver without substantially obstructing the view through a windshield.

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63. (New) The vision system for a vehicle of claim 51 wherein said screen is mounted to one of a dashboard, a facia, a header and a windshield of the vehicle.

64. (New) The vision system for a vehicle of claim 51 wherein said screen is mounted at a position conventionally occupied by an interior rearview mirror.

65. (New) The vision system for a vehicle of claim 51 wherein said screen comprises a display of one of a projected and a virtual image.

66. (New) The vision system for a vehicle of claim 51 wherein said screen comprises a heads-up display.

67. (New) The vision system for a vehicle of claim 50 wherein said fields of view of said at least two image capture devices are dynamically adjustable.

68. (New) The vision system for a vehicle of claim 67 wherein said fields of view of said at least two image capture devices are dynamically adjustable at least as a function of vehicle speed.

69. (New) The vision system for a vehicle of claim 50 wherein said at least two image capture devices have variable exposure periods.

70. (New) The vision system for a vehicle of claim 51 wherein said at least two image capture devices are positioned on opposite sides of the vehicle.

71. (New) The vision system for a vehicle of claim 70 wherein the synthesized image comprises at least two image portions arranged on said screen in the same orientation as respective locations of said at least two image capture devices on the vehicle.

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72. (New) The vision system for a vehicle of claim 71 wherein said image portions are reverse row sequenced from images captured by the respective ones of said at least two image capture devices.

73. (New) A night-vision system for a vehicle, comprising:

a vehicle equipped with at least two image capture devices, said at least two image capture devices capturing an image external of the vehicle;

said at least two image capture devices having overlapping fields of view;

said at least two image capture devices having their field of view in a direction generally forward with respect to the vehicle;

an image processor, outputs of said at least two image capture devices processed by said image processor, said image processor producing a synthesized image from said outputs of said at least two image capture devices; and

said image processor processing said outputs by at least one technique chosen from luminant blending, chrominant blending, dynamic range extending, pixel group compensation, anti-blooming, multiple exposure, image morphing compensation or image warping compensation.

74. (New) The night-vision system for a vehicle of claim 73 including a display screen viewable by an occupant of the vehicle, said display screen displaying said synthesized image.

75. (New) The night-vision system for a vehicle of claim 73 wherein said at least two image capture devices have their fields of view generally symmetrical about the longitudinal axis of the vehicle.

76. (New) The night-vision system for a vehicle of claim 73 wherein said at least two image capture devices comprise multi-pixel imaging arrays.

77. (New) The night-vision system for a vehicle of claim 76 wherein said multi-pixel imaging arrays comprise CMOS imaging arrays.

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78. (New) The night-vision system for a vehicle of claim 74 wherein said screen comprises one of a flat panel display and a cathode ray tube.

79. (New) The night-vision system for a vehicle of claim 74 wherein said screen comprises a flat panel display.

80. (New) The night-vision system for a vehicle of claim 79 wherein said flat panel display comprises one of a liquid crystal display, a plasma display and a field emission display.

81. (New) The night-vision system for a vehicle of claim 79 wherein said flat panel display comprises a liquid crystal display.

82. (New) The night-vision system for a vehicle of claim 74 wherein said screen is positioned within the field of view of the driver without substantially obstructing the view through a windshield.

83. (New) The night-vision system for a vehicle of claim 74 wherein said screen is mounted to one of a dashboard, a facia, a header and a windshield of the vehicle.

84. (New) The night-vision system for a vehicle of claim 74 wherein said screen is mounted at a position conventionally occupied by an interior rearview mirror.

85. (New) The night-vision system for a vehicle of claim 74 wherein said screen comprises a display of one of a projected and a virtual image.

86. (New) The night-vision system for a vehicle of claim 74 wherein said screen comprises a heads-up display.

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87. (New) The night-vision system for a vehicle of claim 73 wherein said fields of view of said at least two image capture devices are dynamically adjustable.

88. (New) The night-vision system for a vehicle of claim 87 wherein said fields of view of said at least two image capture devices are dynamically adjustable at least as a function of vehicle speed.

89. (New) The night-vision system for a vehicle of claim 73 wherein said at least two image capture devices have variable exposure periods.

90. (New) The night-vision system for a vehicle of claim 74 wherein said at least two image capture devices are positioned on opposite sides of the vehicle.

91. (New) The night-vision system for a vehicle of claim 90 wherein the synthesized image comprises at least two image portions arranged on said screen in the same orientation as respective locations of said at least two image capture devices on the vehicle.